REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claim 13 had been amended to overcome the objection thereto by using Markush language.

Claims 8-10 and 13 were rejected under 35 U.S.C. §103(a) as allegedly obvious over the combination of Hansen in view of Clifford. Claims 11-12 were rejected under the same statute as allegedly obvious over the combination of Hansen, Clifford and Bittner. Claim 14 was rejected as allegedly obvious over the combination of Hansen, Clifford and Oei. Claims 15 and 16 were rejected as allegedly obvious over the combination of Hansen, Clifford and Shaw. Applicants respectfully traverse each of these rejections.

Hansen discloses a starting bath as having the composition shown in Table 1 of 12.1 to 14 g/L of Mn and free from Fe^2, that adjusts to a final bath composition of 5 to 9 g/L of Mn and of 4.5 to 6 g/L of Fe^2. The presently claimed invention uses a higher Mn content of the starting bath, but the content of Fe^2 mentioned by Hansen to be zero at the very beginning may increase within very short time because of the pickling of the steel surface. Hansen does not mention how to limit the high content of Fe^2. The strong chemical reaction indicates a high consumption of chemical compounds.

Clifford and Shaw disclose nitroguanidine as an accelerator for phosphating. Bittner and Oei concern Zn(Mn) phosphating, not Mn phosphating. The Zn phosphating or ZnMn phosphating with high Zn content does show some different conditions and effects in comparison to Mn phosphating.

Clifford mentions nitroguanidine as one of the possible accelerators with an optimum concentration of 0.2% = 2 g/L (table). Clifford is directed to phosphate coatings as conversion coatings prior to coating with a paint (first paragraphs). In contrast, the presently claimed invention is directed in part to the object of optimizing the sliding friction, e.g., for cold-forming

of metallic parts. It is noted that nitroguanidine has a quite different behavior than the other nitro compounds that should behave as oxiding agents and accelerators.

The suggested combination of Clifford and Hansen does not disclose the effect nor make it obvious that nitroguanidine allows the control of both the Fe^2 content in the bath solution and the roughness of the phosphate coating.

Generally, as seen from the example/comparison example of the present specification, the roughness index R_z is significantly reduced in the presence of nitroguanidine, although the coating thickness and the coating weight are nearly the same. The effect of the nitroguanidine is indicated by the time of outgassing that shows the time of chemical reaction in the acidic solution which pickles the iron rich surface and generates a higher content of Fe^2 so that the metallic surface seems to be passivated by the nitroguanidine and the chemical reactions seem to be hindered by nitroguanidine. Therefore, in the presence of nitroguinidine, there is a longer time of generating the coating which is favorable for the properties of the coating as there will occur much more crystal nuclei that may grow and cause a finer particle size. Therefore, nitroguanidine is not to be seen as an accelerator or as an oxidation agent, but as a passivation agent to reduce and control the chemical reaction in the bath at and near the metallic surface. Nitrate is added as an accelerator. The content of Fe^2 is correlated to the amount of sludge generated which should be reduced. This leads a higher accuracy of the thickness of such coatings which positively influences processes that need very narrow tolerances for the metallic parts that are used and for their further production steps. In former time it was only known to reduce the mean particle size by minimizing the coating thickness whereby the corrosion resistance was also significantly minimized.

Shaw teaches phosphate coatings which should provide corrosion resistance and paint adhesion (under paints) or lubricant properties for cold-forming. Accelerators like nitrate and nitroguanidine are mentioned also. Shaw had found that it is favorable to let the oil or oil-like substances remain on the surface if they should occur instead of deagreasing the surfaces before phosphating. In Shaw's examples IV, V, VI and VII, which, for arguments sake, are considered to be the closest examples to the presently claimed invention, the baths have an Mn content of

either 0.3 or 4% by weight, that means 3 or 40 g/L, but this range is not in the range claimed in the presently claimed invention .

The Examiner points to example V. Nevertheless, there is no effect mentioned for different accelerators nor is there any teaching that nitroguanidine is preferred instead of or in addition to nitrate. The general object is not to degrease, but to have oil or oil-like substances on the metallic surface.

It is not believed that the remaining secondary references overcome the deficiencies of the primary combination of references.

In view of the foregoing, allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed to our Deposit Account No. 50-0624 under Order No. NY-CHEMMT-206-US.

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Respectfully submitted,

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